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TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

April 14, 2011

TO: Internal File

THRU: Ingrid Campbell, Team Lead IC

FROM: Priscilla Burton, CPSSc, Environmental Scientist, III. PWB by SQS

RE: Bear Canyon Degas Wells 4 & 5, West Ridge Mine, C/007/0041, West Ridge Resources,Inc., Task ID #3809.

SUMMARY:

The Price Field Office received the Task 3809 amendment to add an additional degas well pad in Bear Canyon on April 12, 2011, along with a request for expedited review. The proposed site is located upstream of the gate across the road on SITLA owned surface and about 200 ft. downstream from the existing Bear Canyon GVH site. The general location is in SW1/4 SW1/4 SE1/4 of Sec 3, T. 14 S., R. 13 E. The degas well construction is described in App. 5-14A.

The application is recommended for approval.

TECHNICAL ANALYSIS:

ENVIRONMENTAL RESOURCE INFORMATION

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

SOILS RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.21; 30 CFR 817.22; 30 CFR 817.200(c); 30 CFR 823; R645-301-220; R645-301-411.

Analysis:

The degas well construction is described in App. 5-14A. Attachment 2 of App. 5.14 shows the location of the proposed site to be about 300 ft. downstream from the existing Bear Canyon GVH site. The general location is in SW1/4 SW1/4 SE1/4 of Sec 3, T. 14 S., R. 13 E.

Drawings in Attachment 3 show the proposed degas well location is on the north bank of the right fork of the Bear Canyon ephemeral channel, immediately adjacent to the improved, dirt road. The area of disturbance is approximately 80 ft. x 20 ft. or 0.036 acre.

Large boulders form the steep stream bank and hold the soil. Large shrubs and a tree also hold the bank. (See photos in Attachment 12.) Soil salvage would destroy the integrity of the streambank and destroy the vegetation. Attachment 4 of App. 5.14 shows in cross-section, the use of a permeable, geotextile fabric to separate the topsoil from the fill that would be imported to create the drill pad. The properties of the geotextile are described in Attachment 7. This approach would protect the existing vegetation, the soils, and the bank stability. Soils are similar to those surveyed and described in MRP App. 2-10 and Attachment 2 of App. 5-14.

The Carbon County Order III Soil Survey places the Bear Canyon GVH in Map Unit 21, Croydon Loam which is in the High Mountain Loam grazing site. The NRCS projects that in a normal year production from a High Mountain Range sites may be 1,500-lbs/ac dry weight. In a favorable year the productivity would be expected to increase to 2,000-lbs/ac dry wt.

Findings:

The information provided meets the requirements of R645-301-232.420.

PRIME FARMLAND

Regulatory Reference: 30 CFR 785.16, 823; R645-301-221, -302-270.

Analysis:

The site is undeveloped rangeland at an elevation of 7,200 ft., on a steep slope. There is no prime farmland at this location.

Findings:

The Division finds that there is no prime farmland at the location of the West Ridge Bear Canyon degas well site.

OPERATION PLAN

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-230.

Analysis:

Topsoil Removal and Storage

Bear Canyon Gob Vent Hole

As described in R645-301-200, pg. 2-1, the soil storage area is located 0.1 miles down the road from the pad site. Attachment 11 of App. 5.14A provides the existing Bear Canyon topsoil stockpile as-built soil survey for the existing degas well site and indicates that 19,000 cu yds were salvaged and are stored in the Bear Canyon topsoil stockpile. The topsoil stockpile was seeded with the grass/forb mix listed in Table 3-3 of the MRP or the East Mountain final seed mix provided in Attachment 13 of App. 5-14. The East Mountain mix contains Triticale which produced excellent results in the first season on East Mountain. The East Mountain mix may be used on the topsoil stockpile if it is fresh (purchased in the fall of 2008). The stockpile appeared well vegetated through the snow covering the pile on April 16, 2011.

For degas wells 4 & 5, the MRP meets the requirements of R645-301-232.420, because the Permittee provides a soil protection plan.

Findings:

The information provided meets the requirements of R645-301-230 for topsoil and subsoil salvage.

RECLAMATION PLAN

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-240.

Redistribution

Bear Canyon Gob Vent Holes

Section R645-301-511 of the amendment indicates that the Bear Canyon GVH will be in existence for the life of mine and will continue to operate, even during periods of temporary cessation.

Appendix 5-14, Attach. 8 describes a 23 ft. highwall backfilled to a slope that is 1.5h:1v. Backfill will come from the pad (842 cu yds) and will be placed in 18 – 24 inch lifts. Backfill will include boulders in the fill. Topsoil stored at the GVH topsoil site will be returned to the reclaimed area, following the plans described in Section R645-301-341 of the MRP which are also repeated in App. 5-14 and in Chapter 3, Section R645-301-320. The topsoiled area will be mulched with 2000 lbs/ac alfalfa hay mulch and fertilized if necessary. The surface will be roughened and seeded. A final application of 2000 lbs/ac of straw mulch and 500 lbs/ac of tackifier will be applied.

Adequate volume of topsoil is stored in the GVH topsoil stockpile to be used on the degas wells 4 & 5 stream bank slope if the removal of geotextile and re-exposure of in situ soil is deemed unsatisfactory.

Findings:

The information provided meets the requirements for topsoil and subsoil replacement.

RECOMMENDATIONS:

The application is recommended for approval.